

CLAIMS

1. A diagnostic method comprising outputting a Noise-Vocoded Speech Sound signal that is obtained by dividing at least one portion of a sound signal into a frequency band signal and subjecting the frequency band signal to noise, receiving a response of a patient, and diagnosing a disease of the patient based on the response.
2. A diagnostic method comprising outputting a Noise-Vocoded Speech Sound signal that is obtained by dividing at least one portion of a sound signal into a plurality of frequency band signals and subjecting the frequency band signals to noise, receiving a response of a patient, and diagnosing a disease of the patient based on the response.
3. The diagnostic method according to claim 1 or 2, wherein a disease is estimated with reference to disease database, based on information corresponding to the output Noise Vocoded Speech Sound signal and the response.
4. The diagnostic method according to claim 1 or 3, wherein
the Noise-Vocoded Speech Sound signal in which a component of a sound source signal is subjected to noise is generated by:
extracting a frequency band signal with a predetermined frequency band from at least one portion of the sound source signal by a first band filtering procedure having a plurality of band filtering procedures;
extracting an amplitude envelope of each frequency band

signal by an envelope extracting procedure;

generating a frequency band noise signal corresponding to the predetermined frequency band from a noise source signal by a second band filtering procedure having a plurality of band filtering procedures;

multiplying the frequency band signal by the frequency band noise signal in a multiplying procedure; and

accumulating outputs obtained by the multiplying procedure in an adding procedure.

5. The diagnostic method according to any one of claims 1 to 3, wherein at least one of a number of the band filtering procedures for division into frequency band signals and a frequency of a frequency band boundary can be changed, at least depending on the language.

6. The diagnostic method according to any one of claims 1 to 3, wherein at least one of a number of the band filtering procedures for division into frequency band signals and a frequency of a frequency band boundary can be changed through automatic language recognition.

7. The diagnostic method according to any one of claims 1 to 6, comprising a sound signal extracting procedure for extracting only a sound component from a sound signal, wherein the Noise Vcoded Speech Sound signal is obtained by converting at least one portion of the extracted sound component to a Noise Vcoded Speech Sound signal.

8. A diagnostic device for executing the method according to any one of

claims 1 to 7.

9. A program for letting a computer execute:

5 a step of outputting a Noise-Vocoded Speech Sound signal that is
obtained by dividing at least one portion of a sound signal into a
frequency band signal and subjecting the frequency band signal to noise,
a step of receiving a response of a patient, and
a step of diagnosing a disease of the patient based on the
response.

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10. A program for letting a computer execute:

15 a step of outputting a Noise-Vocoded Speech Sound signal that is
obtained by dividing at least one portion of a sound signal into a
plurality of frequency band signals and subjecting the frequency band
signals to noise,
a step of receiving a response of a patient, and
a step of diagnosing a disease of the patient based on the
response.